



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,253	12/16/1999	LOUIS CENTOFANTI	16715-0121	7296

23594 7590 07/11/2003

JOHN S. PRATT
KILPATRICK STOCKTON LLP
1100 PEACHTREE
SUITE 2800
ATLANTA, GA 30309

EXAMINER

JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
----------	--------------

1754

DATE MAILED: 07/11/2003

22

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	09/464,253	CENTOFANTI ET AL.	
	Examiner	Art Unit	
	Edward M. Johnson	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No support was found in the original disclosure claimed negative limitation, "wherein the polymer is not a superplasticizer". No positive disclosure of a range of all non-superplasticizers was found. Nor was a disclosure of the desirability of avoiding superplasticizers found. Applicant is invited to point out where such support may be found in the original disclosure, should Applicant believe such support exists.

Claim Rejections - 35 USC § 103

Art Unit: 1754

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen 5,551,976.

Regarding claims 1, 12, 22, and 30, Allen '976 discloses a method for the disposal of radioactive waste (see column 1, lines 12-16) comprising: admixing a polymer (see column 5, lines 14-20) with the waste material to encapsulate the waste within the polymer (see column 4, lines 7-13) wherein the polymer prevents radiation from passing through (see column 4, lines 60-62), further mixing the polymer-waste admixture with a shielding material wherein the polymer-waste mixture is incorporated within the shielding material (see abstract and column 2, lines 50-55), and forming the final mixture into solidified, round geometric shapes (which have a high volume per unit surface area compared to thin sheets or rods) to further improve overall performance (see column 3, lines 63-67). Allen also discloses a "comparable solidified waste containing no superplasticizer"

(abstract), which would at least suggest the process both with and without superplasticizer.

Allen '976 fails to disclose alpha particles.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to prevent alpha particle radiation emissions because Allen '976 discloses the disposal of radioactive waste (see column 1, lines 12-16) wherein the polymer prevents radiation from passing through (see column 4, lines 60-62), which one of ordinary skill would reasonably interpret as all radioactive waste emissions, including alpha particle radiation, rather than all radioactive wastes except alpha particle radiation.

Regarding claims 2, 13 and 23, Allen '976 discloses the radioactive material as radon (see column 9, line 67).

Regarding claims 3, 19, and 24, Allen '976 discloses the polymer selected from mineral oil, charcoal, activated carbon, silicates, sulfur, organic polymers or inorganic polymers (see column 5, lines 14-20; column 6, lines 34-56).

Regarding claims 4, 20, and 25, Allen '976 discloses the polymer added in an amount from about 0.1 to about 30 percent by weight based on the amount of waste material (see column 6, lines 14-33).

Regarding claims 5, 11, 17, 21, and 29, Allen '976 discloses disposal by sealing the polymer/waste material in molded forms, such as blocks stored in landfills (see column 2, lines 2-3).

Regarding claims 6, 7, 15, 16, 26 Allen '976 discloses mixing the polymer and waste material with a shielding material such that the polymer-waste material is incorporated with the shielding material, by mixing it with concrete (see abstract and column 2, lines 50-67).

Regarding claims 8 and 27, Allen '976 discloses the amount of shielding material in a ratio from about 2 to 1 (see column 6, lines 24-33; up to about 60 percent concrete).

Regarding claims 9, 10, 14, and 28, Allen '976 discloses a geometric shape with a high volume per unit surface area selected from a substantially spherical or cubic shape to further improve overall performance (see column 3, lines 63-67).

Regarding claim 18, Allen '976 discloses mixing the polymer with the waste material to encapsulate the radioactive material to prevent radiation from passing through (see column 4, lines 7-13 and column 2, lines 57-60).

Allowable Subject Matter

5. The following claim is drafted by the examiner and considered to distinguish patentably over the art of record in

this application, the claim presented to applicant for consideration:

A method for preventing alpha particle radiation emissions from being emitted from radioactive material-containing waste material into an environment comprising:

forming a first admixture by admixing with the waste material a polymer selected from the group consisting of mineral oil, charcoal, activated carbon, and sulfur, wherein the polymer encapsulates the radioactive material and prevents alpha particle radiation emissions from passing through the polymer;

admixing the first admixture with a shielding material selected from the group consisting of ceramic, enamel, concrete, and metal, wherein the first admixture is incorporated within the second admixture, and

forming the second admixture into a geometric shape selected from the group consisting of a spherical shape and a cubic shape, wherein the radioactive material is radon, the polymer is added in an amount of about 0.1 to about 30 percent by weight based on the amount of waste material, and the ratio of shielding material to polymer-waste material admixture is about 4 to 1.

6. The following is a statement of reasons for the indication of allowable subject matter: Although the various limitations of

Art Unit: 1754

the invention appear to be independently known or suggested broadly in the prior art when taken in a vacuum, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to prevent alpha particle radiation using the steps of the above claim wherein the radioactive material is radon, the polymer is added in an amount of about 0.1 to about 30 percent by weight based on the amount of waste material, and the ratio of shielding material to polymer-waste material admixture is about 4 to 1.

Response to Arguments

7. Applicant's arguments filed 11/4/02 have been fully considered but they are not persuasive.

It is argued that the polymers of the present invention, mineral oil, charcoal, activated carbon, silicates, and sulfur, are not superplasticizers. This is not persuasive because Allen discloses silicates (see column 8, lines 40-45), which Applicant appears to admit are not superplasticizers. Applicant further appears to admit that "both of these contain sulfur" referring to the claimed invention and the cited reference.

Conclusion

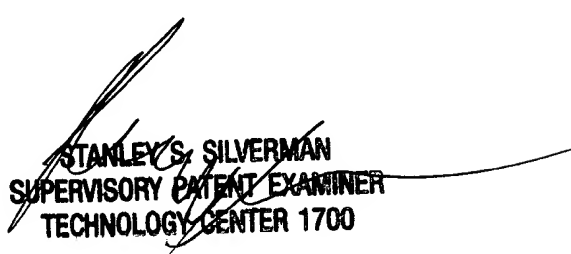
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M.

Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ
July 9, 2003


STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700